

**MARYLAND MEDICAL CARE DATA BASE:
RECOMMENDATIONS ON THE
COLLECTION OF CAPITATED PRIMARY
CARE DATA**

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INTRODUCTION

Analysis of managed care requires a different type of information than what has existed in the "fee-for-service" (FFS) world. Historically, FFS claims have been a major source of data for monitoring the quality, cost, and access to care. As risk sharing and capitated payment arrangements continue to grow, the FFS billing mechanism that has generated much of the administrative data used in policy planning and research no longer exists, at least not universally for all services. In its place, HMOs collect encounter data, which ideally mirror much of the information included on a claim form. Encounter data are records of services provided to HMO members by all providers: hospitals, physicians, and ancillary. They include demographic, diagnostic, and procedure specific information, but usually no financial information.

The Maryland General Assembly established the Health Care Access and Cost Commission (HCACC) in 1993 in part to monitor and assess the cost and use of practitioner services by Maryland residents. Envisioning information that would support the development of cost containment strategies as well as assist consumers, practitioners, payers, and policymakers in health care decision-making, HCACC's mandate included the development of a Maryland Medical Care Data Base (MMCDB) containing information on services rendered by health care practitioners to Maryland residents.

As required by the Medical Care Data Base and Data Collection regulations (COMAR 10.25.06), private payers meeting certain volume criteria are required to submit information on services provided by physicians and other health care practitioners. All FFS encounters provided by health care practitioners and office facilities (i.e. HCFA 1500 claims) were to be submitted. Additionally, payers were required to submit specialty care capitated encounters. However, because a significant portion (42 percent in 1996) of Maryland's privately insured population is enrolled in managed care HCACC contracted for an extramural study of is looking to the future and beginning to consider the costs and benefits of requiring payers in the state to also submit data on primary care capitated encounters.

PURPOSE OF REPORT

This report has several purposes. First, the technical issues surrounding the collection, submission, and use to HCACC of the 1996 capitated specialty encounter data are reviewed. Second, a more general discussion of the potential hurdles and costs, along with the benefits, of moving forward with requiring payers to submit primary care encounter data is presented. Finally, given these discussions, recommendations are made as to how to proceed.

HCACC SUBMISSION REQUIREMENTS FOR 1996 DATA

Beginning with 1996 data submissions, payers whose 1996 premium volume exceeded \$1 million, as reported in statements to the Maryland Insurance Administration (MIA), were required to submit claims data on all FFS practitioner services. A FFS encounter is defined in the regulations as a medical care visit in which a health care practitioner provided a health care service for which a claim was submitted to a payer for payment and payment was made on a per service basis.¹

In an effort to ensure that the data base would include as large a portion of all practitioner services provided, payers were also required to submit 1996 capitated encounter information from managed care arrangements. Realizing the difficulties private payers might face collecting and submitting capitated encounter information to HCACC for the first time, the regulations only required submission of specialty care capitated encounters. According to the regulations, a specialty care capitated encounter is "a health care visit in which a health care practitioner provided a service pursuant to an agreement with a payer for reimbursement of an aggregate fixed sum or per capita basis and which requires a referral or preauthorization from a primary care physician."²

Payers were required to submit capitated encounters in the same prescribed record layout as that used for the FFS claims. The requested data elements included demographic characteristics of the patient, the principal diagnosis, the procedure performed, the date and place of the visit or procedure, and financial information such as billed and allowed charges, the amount reimbursed by the payer, and patient liability. If the health care service was provided under a capitated arrangement, payers were instructed to code financial fields with "-999." Submitting data in the same format would theoretically allow for some FFS and capitated service specialty care comparisons.

Each payer submitting data was also required to submit supplemental information for all practitioners providing services, whether FFS or capitated. This supplemental information included the specialty classification of the practitioner and provider identifier which would make it possible to link practitioner specialty to practitioner service data. One of the key policy questions which HCACC has been investigating using the MMCDB is the difference in the delivery of practitioner services between specialists and primary care physicians. Accurate identification of a practitioner's specialty is critical for investigating this question.

1996 SPECIALTY CARE CAPITATED ENCOUNTER DATA QUALITY ISSUES

The final 1996 MMCDB consisted of over 33 million records. Of these, approximately 10 percent represented capitated specialty encounters. The scope of

¹ Using common terminology more generally used in such discussions, these will be referred to as FFS claims for the remainder of this paper.

² COMAR 10.25.06.02

services represented by the data collected from HMOs compared to traditional indemnity insurers, differed since HCACC did not require HMOs to submit data on primary care capitated services. The absence of primary care capitated services made comparisons of total service volumes between the two delivery types impossible. Because many HMOs pay their providers on a FFS basis, it was hoped that some comparisons could be made between FFS and capitated services in HMOs and also between managed care and FFS indemnity data to examine questions of service intensity, but these analyses were unable to be completed.

In previous years, HMOs had submitted encounters to the MMCDB which had been paid FFS. In general, these claims look identical to FFS claims submitted by indemnity providers. Collecting and submitting capitated encounters is different and, as might be expected in the first year of mandated capitated encounter data collection, many payers had difficulties meeting the data element requirements. After subjecting the specialty capitated encounters to extensive review, HCACC determined that it was not possible to make the data consistent across all payers--a critical step in preparing the information for analysis. For this reason HCACC was unable to use any capitated information in its practitioner payments and utilization chapter in the March 1998 annual report. Additionally, because Medicaid and Medicare did not require the collection and submission of encounters from HMOs in 1996, any analyses performed would have been restricted to the private payer portion of the data base. The major difficulties using the specialty care capitated encounters submitted to HCACC are discussed below.

HCACC Was Unable To Use Physician Specialty Codes For Some Payers

Given the analytical framework of HCACC's annual report on expenditures and utilization, and the importance of practitioner specialty to its reports on high volume procedures by specialty, accurate and consistent submission of physician specialty coding is critical. With this goal, the necessity to make specialty coding on the encounter data consistent with the FFS data is critical if it were to have any meaningful use in the annual report. However, many payers collect limited information on practitioner characteristics--including specialty--since it is not tied to the reimbursement process. While HMOs attempted to submit practitioner specialty information, in many cases it could not be used because the data quality of the field was so poor.

Three payers that could not provide any detailed information on specialty were excluded from these analyses. Other payers submitted practitioner files containing specialty information, but HCACC was not able to link this information to the encounter data file because practitioner identifiers did not match with the practitioner identifiers on the encounter file or the identifier was not included on the practitioner file. In other cases, HMOs were unable to comply with the practitioner specialty coding specifications defined in COMAR, and therefore submitted their provider specialty information using their own definitions. HCACC mapped these payer specific definitions to the COMAR defined specialty field to the extent possible, but sometimes the information was insufficient for an accurate analysis.

The lack of adherence to uniform reporting standards and consistency reduced the usefulness of encounter data submitted. While these provider specialty issues were not confined to the capitated data, it did not appear to be as great a problem for FFS data submissions. For some payers submitting both FFS and capitated information, practitioner specialty was more often missing on capitated encounters than the FFS claims. For some payers, practitioner specialty information was poor on both capitated encounters and the FFS claims. This outcome would occur when the problems resided on the provider directory as opposed to on the encounter or claims files.

Problems with specialty coding are due to a number of complex and inter-related problems. First, there is no industry standard for the definition of specialty. While it may appear obvious that practitioners' specialties are determined by the license or certification which they hold, in many cases this information is unknown, or unrecorded by the payer. This problem is exacerbated in Maryland where physicians must pay extra to receive a medical license with a specialty and having specialty on their license is not legally required. In addition physicians may be Board eligible or certified in more than one specialty and there is no policy about which one is primary. Second, physicians do not always practice their specialty. Examples of this problem are cardiologists who practice as primary care physicians or internists with a sub-specialty in cardiology who practice as cardiologists. The HMO lists them, respectively, in their provider directory, as a primary care provider and a specialist in cardiology because this information determines whether a referral is needed to see them when in fact the "correct" identification would be as a cardiologist and an internist. One can see the confusion here. Finally, the COMAR definition of specialty is neither consistent with Board eligibility or with the payers perception of specialty making for further confusion.

Encounter Data Collected Across HMOs Were Inconsistent

Different payers have different referral and preauthorization requirements, and as a result, the scope of capitated specialty care encounters varied across payers making it difficult to determine what the capitated encounter record represented. For example, in some cases, capitated specialty encounters with valid specialty codes also had procedure codes for routine evaluation and management and preventive services. In other cases, it appeared that the payer had submitted primary care capitated encounters. These types of issues made it impossible to develop a set of accurate and consistent capitated specialty care encounters that HCACC could use with confidence in making comparisons to FFS encounters.

The COMAR definition of specialty encounter specifically states that the encounter be one which requires a referral or preauthorization from a primary care physician, but many HMOs cannot tell which specialty encounters met meet this definition. In the majority of HMOs, FFS claims and capitated encounters are processed through the same system. In general these systems have a number of modules including claims processing, provider information, eligibility, and prior authorization. As the claim or encounter moves

through the system, information from other modules is accessed and checked to ensure that the claim or encounter is processed correctly. In the case of a requirement for a referral or prior authorization the system would check information in that specific module to determine whether the referral or prior authorization existed and if it did, the claim or encounter would continue to be processed until it was paid or accepted by the HMO. Even if a referral or prior authorization was required for that service, this information would not be "attached" to the encounter making it almost impossible for the HMO to subsequently determine which specialty encounters met the COMAR definition. When the HMOs prepare the data submission to HCACC they are forced to use other ways of determining which capitated encounters meet the definition; the results of which are inconsistent across plans as seen by the data quality review of the submitted specialty capitated encounters.

Lack of Financial and Aggregate Utilization Information Made It Difficult to Conduct Various Data Validation Processes

Aggregate and record level financial information is often used as a basis for conducting various data quality assessments. For example, the absence of HMO enrollment information and encounter-level financials on capitated encounters makes it impossible to verify whether the HMO submitted complete and accurate practitioner data.

Financial information is the basis for many of the edits used to validate the reasonableness and completeness of claims data. Aggregated control totals for claims and dollars paid, and the relationship between the two, provide verification that the data transfer has occurred completely and that the appropriate data have been submitted. Record level financials provide the information necessary to determine if the unit of analysis is consistent (i.e. claims level versus service level), if there is a consistent understanding across the payers of the financial variable definitions, and if the variables that allow you to measure volume of service (e.g. units) are reasonable.

The lack of these financial benchmarks in encounter data affect the confidence with which comparative analysis can be done. While one does not expect to receive financial information on encounter data, not having it, coupled with the requirement that the plans only submit a portion of their capitated encounters, makes it almost impossible to determine whether the data are comparable between plans. One is left with only being able to use the data on an encounter specific basis to address issues regarding the reasonableness between the diagnosis and procedures on a specific encounter. Even this analysis could be informative if it were supplemented by reliably knowing the specialty of the practitioner. For instance, with accurate specialty, diagnosis, procedure, and practitioner zip code information, it would be possible to know the different uses of procedures for the same diagnosis and to further explain these relationships by the geographic location of the practitioner. One could look at the acceptance and dissemination of new technology across the state and make comparisons by location, specialty, and type of practice (managed care or FFS). All of these investigations hinge on the accuracy, completeness and consistency on the information submitted across payers.

Short Time Window for Completing Data Quality Analysis

The MMCDB is constructed on an annual basis. In order to ensure that the data base represents the vast majority of services provided in the year under study--in this case 1996--payers do not begin to submit their data until June of 1997. The data submission and review process goes slowly; there are always problems that require resubmission of the data from the payers. Once the data have been received by HCACC they are subjected to extensive data quality review and enhancement prior to being incorporated into the MMCDB. When possible, if problems are identified early enough in the process, payers are asked to make changes and resubmit their data. For the 1996 data, the first time that capitated specialty encounters were included, the data quality investigation was very extensive making it impossible for the payers to make changes and resubmit the data. Problems identified in 1996 have been communicated to the payers and changes will be incorporated into the 1997 submissions. There is every expectation that the specialty encounter data will be of much higher quality and that it will be able to be incorporated into the analysis for the annual report.

POTENTIAL HURDLES AND COSTS OF REQUIRING HMOS TO CAPTURE PRIMARY CARE ENCOUNTER DATA

Under current law, HCACC would eventually like to/must expand the scope of required data submission to include primary care capitated encounters. Careful consideration of this decision requires an assessment of the potential costs and hurdles HMOs might face attempting to meet HCACC data submission requirements since would face many of the same difficulties collecting and submitting capitated primary care data that they did for capitated specialty care submissions. Data inconsistencies that are a function of payer payment policies or information system limitations are not easy to correct. As payers of health care services, Medicaid and Medicare can require plans to collect and submit accurate and consistent encounter data as part of RFP requirements or regulations. HCACC is not a payer, which limits what it can reasonably require and expect of the plans capitated encounter submissions. For example, HCACC has not evaluated each HMO's ability to provide capitated encounter data in the format defined by the regulations. Instead, HCACC must consider the factors discussed below and their potential impacts on a payer's ability to comply with submitting capitated primary care practitioner encounters.³

HMO Information Systems Present Obstacles to Collecting Capitated Encounter Data

³ Adapted from Fox, Kathe P., Ph.D., et al, "Encounter Data and Medicaid Managed Care: Reasonable Expectations for Information in the New World", in Davidson and Somers, Medicaid Managed Care, in press, 1998, Jossey - Bass.

There is significant variability in the structure and sophistication of HMO information systems. This variability can seriously affect the availability and integrity of required data elements. Even within a HMO, systems can be integrated--feeding information into a centralized data warehouse-- or fractured, with multiple systems conducting identical as well as parallel operations. Multiple systems within the same HMO can affect the accuracy, consistency, and completeness of encounter data since data elements may not be defined uniformly across systems. HMOs often process enrollment data in one system, capitated data in another, hospital data, which is often FFS, along with other claims in a third separate system, and pharmacy, lab, mental health and radiology in still other systems. Nationally, some few plans have developed a data warehouse in which all information from their separate systems are merged and standardized for reporting purposes. In Maryland, BCBS of Maryland is actively following this course and will have an operational managed care data warehouse within the year. These HMOs are most readily able to provide data for analysis in uniform, standardized, formats.

The structure of a HMO's system is often dependent upon the number of years it has been in operation and its corporate structure. Some HMOs do not have independent information systems because they are part of a larger health insurance company. In this arrangement, capitated encounters are not easily incorporated into a system which was designed to adjudicate and pay FFS claims. Conversely, small, older, independent HMOs often have highly customized systems which do not accept or easily process "standard" claims and encounter forms. Plans new to managed care are likely to have more sophisticated encounter data processing systems if they have chosen to purchase one externally. Recently, many HMOs have discovered the limitations of their information systems in the process of making Year 2000 (Y2K) modifications. The Y2K modification process has sometimes forced them to purchase or develop a new system giving them the additional opportunity of improving the data capture and retention quality for encounters. However, the adoption of a new system is a slow process and issues surrounding Y2K will take precedence over problems with encounter data submissions when conflicts on priorities occur.

During the recent wave of consolidation in the health care industry, a number of HMOs such as Aetna, US Healthcare, and now NYLCCare have either merged with or have been acquired by other plans, adding another layer of complexity to their existing information systems. When such consolidation occurs, plans have a choice of continuing to process data on existing separate systems, merging all data into one of the existing systems, or developing a new system. Regardless of the choice it takes time to make the changes and then check to ensure that the data are being processed correctly under the new arrangement.

A HMO's data processing flexibility can also be affected by whether it has a national or regional focus. Often HMOs with a national focus process data centrally and make information system decisions at a corporate level. Kaiser is an example of a HMO which is trying to develop a national solution to its regional HMOs. These HMOs have greater difficulty handling local data issues which may lead to incomplete data and poor data

quality. HMOs that are willing to comply with data mandates may find the administrative complexity of multiple data requests overwhelming.

Many Providers Consider Completing Encounter Forms An Administrative Burden

Generally, unless explicit financial incentives are part of the contractual arrangement, providers may have little reason to submit encounter level data to a HMO, especially when payments are not tied to service delivery (as is true of capitation). Moreover, providers may have originally been promised a "no data submission" policy by plans if they accepted a capitation or salaried agreement. If this policy has been in place for a number of years, it is not simple for a HMO to retroactively revoke it and require data submission. At the same time, plans are experiencing increasing pressures to report the details of each health care encounter. Making matters even more difficult for providers, HMOs vary considerably in the encounter data formats they require. Providers contracting with multiple plans have a particular challenge in submitting encounter data to all the plans with which they contract. These factors increase the likelihood that there will be substantial under-reporting of capitated encounters.

Model Type And Provider Compensation Models Affect Encounter Data Quality

Since all encounter data originate with the provider of service, the provider's willingness to submit timely, accurate, and complete information will have a profound effect on the overall quality of a HMO's encounter data system. Providers' willingness to submit data is often tied to the HMO's model type and compensation arrangements. Typical HMO model types include staff, group, IPA, and network models. Each model type has different incentives for providers to submit data and, thus, differing degrees of leverage over providers to enforce data submission requirements. Compensation arrangements (e.g. bonuses and withholds), other non-financial penalties (e.g. disenrollment from the network) can be directly tied to the submission of data, and HMO commitment to sharing data back with the provider community can be the most powerful incentive for a provider to submit timely and complete encounter data. The different model types and their typical data incentive structures are described below.

Staff Model: In a staff model HMO, providers work directly for the HMO and often have a salaried compensation arrangement. Although a salaried arrangement might not create a direct incentive for a provider to submit data, staff model plans have considerable leverage over provider behavior and can enforce data submission requirements. Such plans may also have the ability to institute data collection at the point of service. This is especially true for staff model plans with clinic delivery settings.

Group and IPA Models: In group and IPA models, plans contract with medical groups and IPAs to provide care to their patients. These arrangements are often capitated. Although medical groups and IPAs may have basic data gathering capabilities, these organizations often have the flexibility to contract with more than one HMO, thus reducing a given HMO's leverage over data submission from that medical group or IPA.

Plans may delegate certain functions, including data collection, to a large medical group. In these situations, data quality problems may not be discovered for some time due to lags in submission. In addition, plans may not have sufficient leverage under the existing contract to institute wholesale changes in data submission practices.

Network model: Under the network model, the HMO contracts with medical groups, IPAs, and independent individual providers. These arrangements can be capitated or discounted FFS. The network model offers plans the least control and leverage over participating providers. Providers can contract with other plans simultaneously or easily switch from one to another. Since provider payment is often not dependent on data submission and providers have multiple contracts, there is little incentive to submit timely and accurate encounter information to specific HMO.

Each of the factors discussed in this section point to the significant organizational and infrastructure variability that exists among HMOs, the populations they serve, and their data systems. The implication of this variability is that there is a lack of compatibility in the nature and quality of data available among providers and HMOs. This variability reduces the possibilities for information sharing among the plans and between the plans and the state.

DESPITE POSSIBLE HURDLES, BENEFITS TO MOVING FORWARD WITH COLLECTION OF PRIMARY CARE ENCOUNTER DATA

Evaluating the cost, quality, and access to health care requires information. As risk sharing arrangements and capitated payment arrangements become increasingly prevalent in the health care industry, the body of administrative data generated by FFS billing systems and used in policy planning and research becomes smaller with each passing year. In its place, HMOs can collect capitated encounter data, which ideally mirror much of the information included on a claim form. Capitated encounter data can be a powerful source of information for HMO managers, policymakers, and researchers to evaluate the quality and cost of health care services. Capitated encounter data documents all individual services received by patients and can therefore be used to evaluate and summarize the full range of specific diagnoses and procedures providing more flexibility to detect problems in quality, access and utilization.

Aggregate Utilization Data Are Helpful, But Of Limited Use

Given the potential difficulties faced by HMOs in collecting and submitting capitated encounter data, HCACC might consider only requiring plans to submit aggregated financial and utilization primary care data. HCACC could allow plans to report aggregate rather than claim specific data in a reporting format similar to the analyses presented in the annual report. It would be a major mistake to go in this direction.

Although summary utilization statistics and encounter data both capture patient use of services, utilization statistics are compiled for only specific types of services, such as mammograms or childhood immunizations. Consequently, utilization statistics cannot be used to determine the full range of services members receive. Also, if plans are required to submit predetermined aggregate utilization statistics they could concentrate on improving only these defined areas. With encounter data, HCACC could explore service delivery beyond what is captured by utilization statistics.

In addition, there is every reason to believe that the plans would have as much difficulty submitting aggregate information as they do submitting detailed encounters. Most plans which cannot submit detailed encounters for capitated services are not tracking this information internally for their own use either. Table 1 of this report shows the method Maryland plans used to calculate the HEDIS effectiveness of care measures which were required in the Maryland Report to Consumers on Managed Care, another initiative at HCACC. All of these measures can be calculated using administrative data, but, as the table shows, the majority of plans chose to use the hybrid method instead which does not require complete encounter data. While the plans were not surveyed concerning why they chose the hybrid rather than the administrative method, one must assume that they did not feel that the administrative data were reliable enough for external reporting.

The Administrative Burden For Providers To Record Capitated Encounters Is No Worse Than That For Claims

Claims that filling out encounter forms places an additional administrative burden on providers is not an especially compelling argument --providers have been doing it for years in their FFS business. HMOs may argue that requiring providers to either continue or return to submitting claims for every service goes back on promises made of less paperwork. This approach would be is a very short-term perspective for plans to take. HMOs cannot really effectively run their businesses without service level encounters. While there are costs associated with collecting capitated encounter data, having this information can only help their business in the long run. For example, without encounter level detail for the full spectrum of services it provides, plans would not be able to respond to critics' claims that the financial incentives inherent in many managed care arrangements may result in fewer services or inferior quality care being provided. By having a statewide data base of all services rendered by Maryland practitioners-- provided under both FFS or capitated payment arrangements-- HCACC would have the capability to conduct and change various analyses without adding additional burden to plans by requiring them to submit entirely new sets of aggregate utilization statistics.

TABLE 1
SOURCE OF HEDIS DATA COVERING CALENDAR YEAR 1996 FOR MARYLAND HMOS

Effectiveness of Care Measures	PLANS											
	Aetna/ USHC	Capital Care	CIGNA	Delmarva	Freestate Health Plan	George Washington University	Kaiser Permanente	MAMSI	NYLCARE	Preferred Health Network	Prudential	United Healthcare
Childhood Immunization Status	H	H	H	H	H	H	H	H	H	H	H	H
Adolescent Immunization Status	H	H	H	H	H	H	H	H	H	H	H	A
Breast Cancer Screening	H	H	H	A	H	H	A	H	H	H	H	H
Cervical Cancer Screening	H	H	H	A	H	H	H	H	H	A	H	H
Prenatal Care in the First Trimester	H	H	H	H	H	H	A	H	A	H	H	H
Check-Ups After Delivery	H	H	H	H	H	H	A	H	H	H	H	A
Beta Blocker Treatment After a Heart Attack	H	H	H	H	H	H	A	H	H	A	H	A
Eye Exams for People with Diabetes	H	H	H	A	A	A	A	H	H	H	H	H
Follow-up After Hospitalization for Mental Illness	H	H	A	A	A	A	A	A	H	A	H	A

A= Administrative

H= Hybrid

Despite The Absence Of Financial Information On Submitted Encounters, Validation Can Occur By Other Means

In the process of developing capitated encounter data, it is critical for HCACC to establish methods for validating the accuracy and reliability of the encounter data submitted. There are many tools and techniques that can be used to validate encounter data completeness and accuracy without expending extensive resources.⁴ One data validation option would be to create utilization rates by specialty or type of service and make comparisons between FFS and capitated HMOs. This strategy would not provide detailed information regarding weaknesses in the encounter data, but it would provide an estimate of where those problems may be. These reports could be run in aggregate and for individual HMOs to determine which HMOs data may be of sufficient quality for use in the practitioner analyses, or conversely, which plans are most likely to have contributed incomplete or inaccurate data.

Another option is to compare the encounter data submitted to HCACC to predefined rates or statistics compiled internally by the HMOs and provided to HCACC. Assuming that the HMO is submitting full encounter data, and the analyses are defined in the same way, there should be few differences in the two sets of statistics. In other words, if the HMO's submitted encounter data showed that a HMO performed 67 tonsillectomies, its aggregate utilization report should also show a total of 67 tonsillectomies performed.

Looking more broadly, a wealth of normative and benchmark information is publicly available by provider types, provider specialties, geography, payer, population, and clinical conditions. For example, NCQA's Quality Compass is a national data base of comparative information about the quality of the nation's HMOs. Bringing together data from hundreds of HMOs has enabled NCQA to generate national and regional averages for various aspects of HMO performance. HCACC could make the generation of similar selected indicators a part of its validation process in an attempt to identify critical gaps in the encounter data submitted by the plans.

Many HMOs Are Currently Collecting Some Form of Encounter Data

As discussed earlier, as part of The Maryland Report to Consumers on Managed Care, plans were required to calculate and submit HEDIS measures for 1996 and 1997. These measures were externally validated and then reported to the public. Table 1 above, shows the methods that the plans used to calculate the effectiveness of care measures. All of the measures for three of the twelve plans were developed only using the hybrid method, which allows the use of either administrative data or medical record review to determine the numerator of the measure. For the rest of the plans, the numerator for at least one of the measures was calculated using only administrative data (submitted claims or capitated encounters). While this information does not indicate whether the plans are

⁴ For example, see "HCFA Encounter Data Guide: A Guide for States to Assist in the Collection and Analysis of Medicaid Managed Care Data."

capable of collecting the data elements required by HCACC, it does show that the plans have at least some capabilities in this area.

Moreover, if an HMO has a risk-based contract with either Medicaid or Medicare, which is increasingly the case, the HMO is required to submit encounter data. Maryland implemented the HealthChoice program for Medicaid beneficiaries in July, 1997 and requires full submission of encounters. Medicare will begin requiring plans to submit encounter data in July, 1998.

Efforts Are Currently Underway to Standardize Encounter Data Across the Managed Care Industry

The Medicare-Medicaid Common Data Initiative Steering Committee was created to serve as HCFA's focal point for coordinating managed care data issues. In 1995, this group created a Core Data Set for States and HMOs in an attempt to standardize managed care data requirements for Medicare and Medicaid. This proposed encounter data set was designed to link to other files such as eligibility and provider files. It differentiates between the following types of encounters:

- Physician and other providers
- Hospital
- Long term care
- Prescription drugs
- Dental Services

This initiative is considered by many to provide the common denominator data elements needed to analyze managed care experience. It uses the current Medicare standard billing forms -- the HCFA1500 and UB92 -- for variable definitions and valid values.

The Kassebaum-Kennedy Bill, also known as the Health Insurance Portability and Accountability Act (HIPAA) of 1996, requires the Secretary of Health and Human Services to adopt national standards for electronic health care transactions, including health claims or equivalent encounter information. Today, most health care providers and plans use many different electronic formats, with different data requirements, to exchange claims. National standards will achieve administrative savings and reduce the administrative burden on health care providers and HMOs. On May 7, 1998, the Notices of Proposed Rule Making (NPRM) related to these national standards and the National Provider Identifier were published in the Federal Register to solicit comments on the proposed rules. This gives interested parties in the health care industry the opportunity to affect the final rules by participating formally in the rulemaking process. Comments on these rules will be analyzed and responses incorporated before the final rules are published.

SUMMARY OF THE COSTS AND BENEFITS OF ENCOUNTER DATA COLLECTION

The preceding discussion has touched on a variety of issues surrounding the costs and benefits of collecting encounter data. In summarizing these issues it is important to specifically consider the costs and benefits to three primary groups: the practitioners (physicians and other providers), the payers (primarily HMOs) and HCACC, which represents consumers, purchasers, and policy makers. The costs to these groups are as follows:

Practitioners

- Time to complete and submit the encounter form
- Lack of standardization in encounter data submission across payers

HMOs (payers)

- System modifications to capture required data elements
- Provider contract modifications to require encounter data submission
- Programming of multiple data submission formats due to no standardization across data requesters on required data elements, timing, and breadth of data

HCACC

- Large volume of data submitted and processed with poor data quality

The benefits to these groups, however, extend beyond supplying high quality encounter information to HCACC. Having accurate, complete, and reliable encounter data improves the quality of decisions that can be made in all parts of the managed care system. If practitioners completed and submitted full, accurate encounter data, and if the HMOs processed and retained the information in a useable format, the following benefits would accrue to all participants in the process:

Practitioners

- Comparative information to shape practice standards. Comparisons could be made to other providers in their geographic region, to all providers in the HMO, and to regional and national benchmarks and standards.
- Patient identification for preventive care. HMOs could create lists of patients for providers which would let the provider know who needed preventive care such as cancer screens, diabetes check-ups, and blood pressure monitoring.

HMOs (payers)

- Information for setting and adjusting reimbursement to providers.
- Information for conducting quality reviews of providers.
- Easier access to information for calculating HEDIS measures.
- Information for measuring and changing physician practice patterns.

HCACC

- Information for analyzing service delivery under HMOs compared to that found in other delivery system types.

For example, the following questions in four analytical categories of interest could only be answered by including all capitated encounters in the analysis data set:

General HMO comparisons:

- Do the number of visits or services provided to HMO enrollees differ significantly from what is received by enrollees in other HMOs?
- How does the mix of practitioners providing these services differ between HMOs and other HMOs?

Population-specific comparisons:

- How do the patterns of treatment (e.g., number of visits, services, etc.) received by children enrolled in HMOs differ from what is received by children in other HMOs for: a) common childhood illnesses, such as otitis media, and b) preventive visits, by age group?

Disease-specific comparisons:

- How do the patterns of treatment (e.g., number of visits, services, etc.) for chronic conditions, such diabetes and asthma, in HMOs differ from the treatment patterns in other HMOs?

Specialty-specific comparisons:

- How does the scope of practice for specific types of providers, such as pediatricians, within HMOs differ from the scope of practice for the specialty in other HMOs?

RECOMMENDATIONS

Given the costs and benefits of collecting capitated encounter data, HCACC should proceed slowly with implementing the expansion of managed care capitated encounter data to include primary care encounters. Based on the 1996 encounter data submission experience, we know that plans face many organizational and technical issues surrounding the submission of capitated encounters for specialty services, therefore, this expansion should occur only after substantial progress has been made in resolving these issues. Large repositories of capitated encounter data are useless unless they can be analyzed, compared to FFS experience, and subsequently applied to health care policy within the state. The more feedback the State can provide plans and practitioners that will help them manage their own services and patients, the more they will understand and accept the need for data collection and reporting. The analysis and reporting process must include creating measures that provide benchmarks for practitioner performance comparisons.

Work To Resolve And Consider Some Of The Technical Issues Surrounding Submission Of Capitated Encounter Data Before Moving To The Next Step

Additional study is required if encounter data collection is going to be successful. HCACC should work closely with selected individual HMOs next year, to better understand issues surrounding the submission of encounter data. In these meetings HCACC should obtain feedback on the required data elements and submission requirements as they relate to encounter data. In addition HCACC should incorporate the information which has been collected as part of the Managed Care report Card project into its understanding of the issues faced by the plans. The HEDIS information could also be used as benchmarks for the validation of the encounter data submitted as part of the practitioner data base.

Develop and Communicate A Clearer Definition Of Specialty Care

In order to make capitated specialty care submitted in the future useful for analysis, HCACC will have to work with the plans to develop a clearer definition of specialty care. In general, recipients must be referred to specialists by their primary care provider. However, as HCACC found to be true, the definition of specialist differs by HMO. For example, some plans consider OB/GYNs to be specialists, while other plans consider them to be primary care physicians. HCACC needs to determine what its definition of specialist care will be and it needs to eliminate the requirement that the definition be linked to a referral or prior authorization. A possible recommendation could be a requirement that all encounters be submitted for providers who are not considered primary care providers (PCPs). In general, HMOs can easily identify their PCPs. In addition all encounters with OB/GYNs should be submitted regardless of whether the HMO considers the physician to be a PCP.

As described by the Institute of Medicine (IOM 1978), primary care services have certain characteristics which differentiate them from specialty or other kinds of care which are episodic or require a referral for the individual to access. There are many types of primary care services, but they differ from specialty or other kinds of care because they relate to an ongoing responsibility, accountability, or link to a primary care provider. This responsibility may include case management and care coordination services, as well as a range of diagnostic and treatment services. Primary care services include well baby, child and adult visits, preventive services including immunizations and flu shots, and screening services. A specialist is a health care professional who is not a primary care provider.

CONCLUSIONS

The problems HCACC experienced this year in the collection and use of specialty encounter data are not unusual. Data submitters need time and information to understand and correct the problems with their data submissions. HCACC thoroughly tested the quality of the 1996 submitted data and shared their findings with each data submitter. This information will be reviewed by the data submitters and hopefully used to improved

the submissions for 1997. Given the improvement that HCACC has seen with the FFS claims submissions since the 1992 data, there is every reason to believe that the 1997 specialty encounter data will also be of much higher quality and can be used for analysis.

Because HCACC is responsible for monitoring and assessing the cost and use of practitioner services by Maryland residents, it cannot ignore the fact that FFS data will become increasingly less available as managed care assumes a greater share of the health care market. Without detailed encounter data, HCACC cannot measure the value of health services provided within the state or tell whether practitioner behavior is changing as a result of the shift to managed care. Any future attempts to measure and compare utilization of practitioner services in the FFS versus managed care delivery systems would be undermined by the absence of data. While the development of accurate and consistent encounter data will be a slow process, it will be no more difficult than the investment which has already been made in the accuracy and completeness of claims data; this too was an evolutionary process.